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SAN DIEGO ZOO



GUADALUPE FUR SEAL (*Arctocephalus townsendi*)

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ZOONOOZ

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The next ZOONOOZ will contain pictures and an account of the interesting experiment being conducted with Galapagos Tortoises in conjunction with the New York Aquarium.

There are several bird families which can be seen at most unexpected places. This is the result of the policy adopted of turning loose in the garden the birds and animals which will adapt themselves to this condition. If it were not for the stray cats which find their way uninvited into the grounds many more might be thus freed to roam at will. This year among the broods are to be found; Wild turkeys, Silver pheasants, peacocks, ducks and geese. There are many coveys of Valley quail, and the close observer who knows where and how to look will discover gold finch, mourning doves, wren, orioles and even humming-bird nests many of them close along the walks and paths.



GOOSE POND

ZOO BABIES

Barbary sheep, twins, are one of the latest additions to the zoo youngsters which have been born this spring. Others include lions, a Nubian Baboon, nine kangaroo and wallaroo, a Hog deer, and a lemur. Two Phillipino Water Buffalo calves have also been born this spring, making a fine large herd now on exhibition. However the star baby of the year is a tiny fuzzy Nyassaland Love-bird. Just at present he is all head and big white rimmed eyes. He is just as important as his parents and quite as wise. Most of the wild doves and pigeons are breeding now and almost every week there is a new brood among the doves in the Horse-shoe group of cages.

THE GUADALUPE FUR SEAL

(Arctocephalus townsendi)

By HARRY M. WEGEFORTH, M. D.
President,

ZOOLOGICAL SOCIETY OF SAN DIEGO.

The known history of the Guadalupe Fur Seal (*Arctocephalus townsendi*) begins in the early years of the nineteenth century with the records of the slaughter of large numbers of a fur-bearing seal on the Cedros, the Guadalupe and other islands of the Pacific Coast as far north and including the Santa Barbara Islands and the Farallones. It is impossible to estimate with any accuracy the actual numbers of these seal. The ancient rookeries which have been explored by scientists of late years would indicate that they were fully as numerous as the northern fur seals have ever been. The rookeries on the Guadalupe Islands alone could easily have harbored 100,000 adult seals. The largest of these rookeries situated at the south end of the island is more extensive than the largest of the ones on the Pribiloff.

The extermination of this vast herd was the work first of the Russians and then the Yankee sailors. There can still be seen the ruins of the sealing posts, established there by these agencies for the use of the Aleutian Islanders whom they brought down from the north to do the actual work, leaving them on the island for the season. There are such remains at Jacks Bay and the large rookery on the south end of Guadalupe. The cleared areas above the rookeries used for stretching and drying the skins can still be seen, even the pegs for staking them down, being still in place. Due to climatic conditions however, there are no bones remaining, a fact greatly regretted from a scientific point of view.

Practically the entire herd was exterminated so far as commercial value is concerned early in the last century, but there have been instances of killing them in quite large numbers as late as 1894. None of the early records mention the variety of seal taken, as it was not at that time known that the Guadalupe Seal was of a different and distinct species. Dr. Edwin C. Starks (1) proves beyond any reasonable doubt that practically all of the fur seal taken on the land of the California coast must have been of the Guadalupe species. This conclusion is based upon the time of year the hauls were made; the present disappearance of all fur seal from these places, which would not occur if they were the northern seal migrating; and the evidence of the rapid annual decline as shown by the records of the sealing companies.

Including the records of the kill on the Farallones more than 130,000 skins can be accounted for, not more than 4000 of these could, by any chance, have been Alaskan seal killed during the annual migration of the great herds. Dr. Charles Haskin Townsend accounts for 16,913 taken from the Guadalupe Islands and vicinity by American companies from 1806 to 1894. (2)

The first scientific identification of the Guadalupe seal as a distinct species was made from four skulls which Dr. Townsend secured on his trip to the Guadalupe Islands in May, 1892. (3) At this time a few seals were seen in the water, but in spite of diligent searchings of the caves

of the island, none were captured. The habit of this seal of hiding or lying in caves has made it more difficult to capture than most other species.

That scientists interested in the tragic history of this valuable animal have never been really convinced of its complete extinction is evidenced by their constant reference to their attempts to discover it in some of its old haunts. Every expedition which has been made to the islands and even the mainland in close proximity to its old home has included at least a cursory search for the Gaudalupe seal, for it is a known fact that it is practically impossible to compel these animals to change either their habits or their habitat. Dr. Townsend in his expedition on the "Albatross" in 1911 looked in vain for a single specimen, or evidence of recent habitation. The expedition of the "Tecate" in 1922, which was a joint expedition of Mexican and American scientists made extensive surveys of the old rookeries contributing much valuable knowledge to the already existing facts concerning this fur seal and its ancient home on the Gaudalupe. The California Academy of Sciences and the Natural History Museum of San Diego have done much valuable work in search of this apparently vanished specimen. (4)

There is however always some doubt in regard to the complete extinction of any species being entirely due to the agency of man. Extinction by this means could hardly be absolute as individuals would always be able to make their escape, but there is usually an accompanying epidemic which wipes out the remnant of a depleted herd. For instance the Northern Elephant seal on the beach of Guadalupe have been slowly increasing in number during the years they have been protected, but not with the rapidity it was expected. The number of those found dead upon the beach on every visit to the island is indication that they are subject to fatal diseases, which kill off large numbers every year. These carcasses covered by the wind and water by huge mounds of sand show that have crawled high up on the sand to die. This is characteristic of those which have died in captivity in the zoo at San Diego. Autopsies show that all have died with the same disease. The bacillus which has been found through the intestinal tract, in the blood stream and even in the tissue, has not been identified as yet, but it is certain that the disease is slow in development and only those which are already in the advanced stages die during the early days of their captivity. It is therefore quite likely that part of the destruction of the Guadalupe Fur seal was in part due to some such catastrophe.

Many reports of sighting fur seal in the southern waters have come to the writer, brought in from time to time by the fishermen, who go down the coast of Baja California, but none of these reports has ever been authenticated in spite of efforts on the part of the Zoological Society of San Diego to do so. Recently Wm. O. Clover, engaged in such fishing, reported that he had located on a group of rugged rocks far off the southern coast a colony of fur-bearing seal. Mr. Clover had seen and was familiar with the northern fur seal and was convinced, first that these seal he had seen were not Alaskan Fur Seal, and second that they could not possibly be confused with any species of sealion seen in this

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zone. Ever hopeful that there might sometime be discovered, as Dr. Townsend had predicted, a few scattered survivors of the Guadalupe Seal, but prepared for another disappointment, the Zoological Society of San Diego commissioned Mr. Clover to secure if possible a few of the specimens he had seen. His first report had been of the presence of possibly sixty seals including bulls, cows and some pups.

On his return to the island he found that apparently the entire herd with the exception of six adult bulls had left the shore, but some of the cows were swimming in the water off the rocks. He waited two days hoping they would haul out on the beach, but finally due to threatening weather decided to catch what he was able. He succeeded in catching four in his nets. The two largest fought their way to freedom and made good their escape, the other two he was able to land and these he brought directly to San Diego arriving on April 25, 1928, after an exceedingly stormy and hazardous trip.

Upon his arrival in San Diego the writer made a close examination of their fur and general characteristics, comparing them with the known varieties, and was thoroughly convinced that in truth they were the genuine thing, and he had at last had the good fortune to participate in the rediscovery of the Guadalupe Fur Seal. A tentative announcement of this fact was made in order to call it to the attention of scientists. Such an announcement could hardly be received without much surprise and some scepticism.

The arrival of these seal at this particular time could not have been more opportune, as the Society was expecting almost daily the arrival of Dr. Townsend from the Galapagos Islands with a shipment of tortoises. He lost little time in viewing what was perhaps the first living specimen of the fur seal bearing his name that he had ever seen at close range. After studying the location in which they were captured and observing them closely for some time, Dr. Townsend expressed himself as convinced that his prophecy had come true and that in all likelihood there was the nucleus of a new colony concealed in some of the totally unfrequented rocks and caves in the vicinity of the old rookeries.

To avoid a recurrence of the frenzy for specimens which followed the taking of what was thought to be the last of the Northern Elephant Seal, and which did nearly result in its complete destruction, the exact location of the herd is to be withheld. It is hoped that with proper protection it may increase in numbers as did the elephant seal and until such a time as the official steps can be taken to give it protection which will allow this increase, it is to the advantage of science that this knowledge be kept secret. The Mexican Government has been most earnest in the preservation of these vanishing species and it is certain to act promptly in this case.

The Guadalupe Fur Seal (*Arctocephalus townsendi*) has many characteristics in common with the Alaska Fur Seal (*Callorhinus alascanus*). First among them is its tenacity in clinging to its home in face of sure destruction. It shows practically no fear of human beings, allowing a person to touch it through the mesh of its crate, and returning time after time to the place from which a keeper is trying to drive it. They show little tendency to attack even in self protection, a trait wholly different from the other specimens of pinniped we have in the zoological garden. They have the habit of other fur seals seen in captivity of constant activity in the water. They are constantly combing or scratching their fur and rolling over and over in the water. So long as they are together in the water they pay little or no attention to each other, but the minute they emerge upon the shore the larger drives the smaller one away from the chosen spot as tho to protect his rookery from an in-



GUADALUPE FUR SEAL

truder. They pay absolutely no attention to either the Elephant Seal, nor to the California sealions, with each of which they have been confined, but in each instance the other seal after examining them; pointedly left their vicinity and kept aloof even if they were thus compelled to stay in less select places. The Elephant Seal which had refused to climb out on the sand for weeks left the water and refused to return for twelve hours after their arrival. While in the water they keep ruffling their long fur filling it with air so that air bubbles are constantly rising around them giving them the appearance of expelling air through the skin. They have a habit of expelling air from their lungs while under water, which we have never observed in our captive sea lions. Their bark is a throaty muffled sound with sometimes almost the tone of a steamboat whistle; it is totally different from the shrill penetrating bark of the sea lion. They do not rest along the edges of the pond, from choice preferring the rocks out in the center or the caves where it is dark and cool. They do not remain, however, in any one place or posi-

tion for very long at a time but are very restless and active even on shore.

Their appearance is distinctly different. Their coat is a dark rich blackish brown fur verging in places on a mahogany. Through this fur the long coarse bristles protrude fully half an inch, being considerably longer and thicker around the head and shoulders and are quite grizzled in appearance. In the sunshine they look almost silvery especially in the older specimen. In the water the fur has a sort of metallic luster, but upon emerging they shake themselves much as a dog does, thus causing their fur to stand erect so the color of their coat is quite changed. The fur is to all appearances fully an inch thick beneath the longer bristles.

The shape of the animal is noticeably different from the California Sea lion being shorter and heavier with shorter thicker necks. The muzzles are shorter than the California Sea lion and the forehead seems to rise a little more abruptly. The ears are similarly placed. The two specimens we secured are young adult bulls weighing about four or five hundred pounds each. They are about one third the size of the full grown sea lions of the California coast. The teeth are in much better condition than those of the average young sea lion which would indicate that their food consisted more probably of live fish caught swimming as many of the teeth of the sealion are broken from feeding on shell fish, octupii, etc. caught on the rocks. They have refused steadily to touch the fish since their capture although only the freshest obtainable has been offered to them.

All seal are known to be migratory in their habits. Authentic reports from fishermen who are familiar with the Elephant seal show that they have been seen off the coast of San Diego County swimming in the water at La Jolla and near the Coronado Islands. There is little doubt that the Guadalupe fur seal, which has been killed off the California Coast as far north as Santa Barbara, have not completely changed their habits. Therefore it is very probable that these seal have been seen in the northern waters, though not identified as a different species from the California sea lion. This likelihood however is another argument against the indiscriminate slaughter of the sea lion. Careful study of the individuals alone would determine its variety and the fisherman or professional hunter intent on slaughter will shoot first and examine afterward. To develop and protect this nucleus should be the object not only of scientists but economists in order that it can again become a matter not only of scientific interest but of commercial value to the world.

Notes:

(1) Starks, E. C., 1922. Records of Capture of Fur Seals upon land in California. California Fish and Game, Vol. VIII No. 3 pp. 15-60.

(2 and 3) Townsend, C. H., The Northern Elephant Seal and Guadalupe Fur Seal, in Natural History Vol. XXIV Sept. and Oct. pp. 567-570.

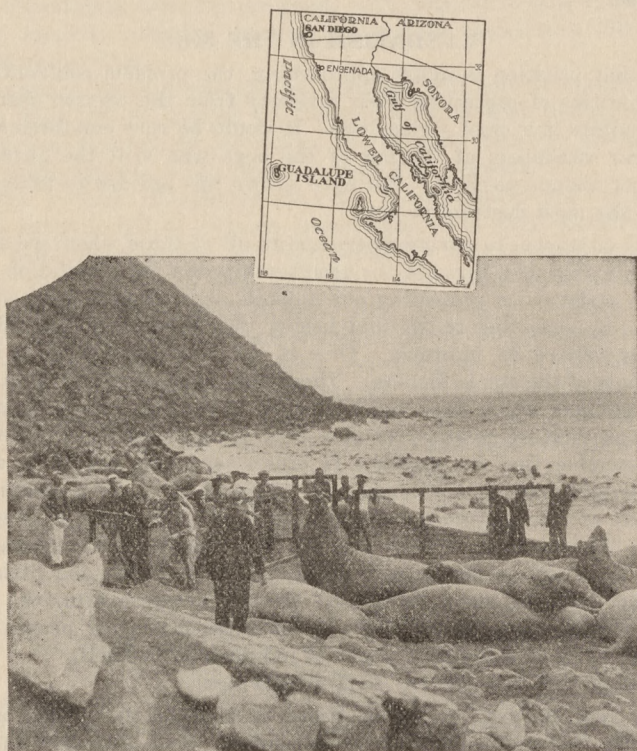
(4) Hanna, G. D. Expedition to Guadalupe Island Mexico in 1922, in Proceedings of California Academy of Sciences General Report, Vol.

XIV 1925, pp. 240-245.

(4) Anthony, A. W. Expedition to Guadalupe Island, Mexico in 1922 The Birds and Mammals in Proceedings of California Academy of Sciences, Vol. XIV 1925, pp. 306-308.

"Bosco," the largest and best known of the Northern Elephant Seal which have been the pride of the Zoological Society, succumbed to an intestinal disorder of long standing and on the morning of May 27, his keeper found him half-way up the incline which had been constructed this spring so that he could raise his huge bulk out of the water.

Autopsies had been performed upon the bodies of each elephant seal as it died and it was found that the cause of death was the same in every



CAPTURING ELEPHANT SEAL

case. A bacillus was present in the intestines, the muscles and blood passages. It is doubtful whether or not his captive state even hastened his death. There are always mounds of sand covering the carcasses of elephant seal to be seen upon the sand of Guadalupe. On one occasion when female seals were exceedingly scarce upon the beach the men being very anxious to secure two female for which the Zoological Society had permits, drove one which was lying high upon the beach among these

mounds into a crate. She made no resistance at all to her capture, but before it was possible to launch her crate in the water she died with blood issuing from her mouth. There was no occasion for rough handling and every one present was sure that her death had been due to natural causes. It is in an exactly similar way that every one of the Elephant Seal in the Zoological Garden have died.

Bosco weighed in the neighborhood of 2000 pounds when he was brought to the zoo. He was here almost exactly 23 months; a remarkable record. He had grown one foot and nine inches during his stay at the zoo. His actual weight after death was 2290 pounds. His body was presented to the Natural History Society to complete their group of Elephant seal composed of the different sized specimens which have died in the zoo.

VANDALISM IN THE ZOO

Now that vacation is again approaching, the problem confronting the zoo authorities of protecting their property from the wanton destruction of the visitors is a most serious one. It would be very comforting to lay all of this vandalism at the door of the boys who visit the garden, but this is not always possible. For even grown ups are apt to take part in some of the most destructive acts.

This is an appeal to our members and to all of those whom we are able to reach in this way through the membership and the circulation of this paper to assist us in protecting our animals and property from such destruction, by reporting to the first keeper they meet or at the office any acts they regard as improper. One of the commonest crimes against the animals of the zoo is feeding. There are only a very few cages which contain animals which must not be fed by the public. Even though the food which you are tempted to give may not in itself be injurious you must remember that the example to others who may not be so well informed is very hard to overcome. Furthermore we make a careful study of the diet of animals and give them what they should have of every type of food. For instance, raisins are good for the little Orang-utans, but we give them the proper number as part of their meals and little Jiggs should not have so many as Maggie does. Therefore after the keeper has given them their proper share a few more raisins or prunes makes them just as ill as something which is indigestible in itself.

Help us enforce our few **DO NOT FEED** signs.

The temptation to throw rocks, stones or boulders at sleeping animals is not only destructive, it is extremely cruel. Seal, alligator and some birds have been blinded in this way. They cannot protect themselves from you and your stones; they are confined here for your benefit and pleasure. Ordinary kindness and humanity should make such an appeal as this unnecessary.

Destruction of property is more difficult to deal with in many cases. Much trouble and expense has been brought about by vandals who take delight in rolling the heavy benches provided for the comfort of the public off of the roads and down the hills. These benches are expensive; they are heavy, being largely of concrete and it is not possible to dis-

lodge them without a good deal of effort. It cannot give anyone pleasure to do this, and they are a great comfort to the pedestrian if left in their position on the roadside under the trees.

Vending machines have been installed at different points in the grounds, not so much for the revenue, but for the pleasure that people find in feeding the animals especially the bears and elephants. There is hardly a week goes by that one or more of these machines is not put out of commission by the public. One has been completely wrecked by being pounded open by an iron pipe. The whole amount anyone could secure if the machine had been emptied of its contents is \$1.30. Hardly worth the effort financially. It cost the society \$15.00 two months ago and held corn for the ducks and geese. Many people enjoy feeding these birds and find themselves down by the ponds with nothing to feed them unless they are familiar with the garden, and provide themselves with something before leaving.

This summer the Foreman and his assistant will both be special policemen and there will be none of the leniency we have been showing toward those we find deliberately destroying the property that we are securing at such great cost and maintaining at such great expense.

The Zoo is used all summer long for picnic crowds and as soon as school is out it is full of children unaccompanied by their parents. It is not the little children who are responsible for this destruction as they seem to appreciate fully the wonderful treat they have in the zoo. Several remedies have been offered. One is that we refuse to allow children in the garden unescorted, another that we charge them admission so that they will feel that it is worth something to come into the zoo as things which we receive too cheaply are not held in high esteem. Neither of these two remedies appeals to the Board of Directors of the Zoological Society. We want the children of San Diego and those who are visiting here to get every bit of information and pleasure out of the zoo that they can; it is planned primarily for their education and pleasure, to them it is dedicated and for them it is being maintained.

A LITTLE STRANGER

Truth is stranger than fiction they say and this is a strange coincidence we are telling. Just as we go to press, lamenting the loss of the last of our Elephant Seal, the Yacht "Stranger," Capt. Fred Lewis, owner and master, sailed into San Diego Harbor, bringing to the San Diego Zoological Garden a little stranger. This was nothing less than a baby Elephant Seal, for which the Zoological Society had had a permit for some time from the Mexican Government. Mr. and Mrs. Lewis before planning the cruise down the coast of Baja California spent a day with Dr. Wegeforth at the San Diego zoo and offered to take pictures for their zoo to use in its educational and scientific work. Having the opportunity, and the permit, Mr. Lewis picked out the finest baby on the beach and brought it to the zoo. Another strange part of this story is that this baby weighs between three and four hundred pounds, and is just as much at home in the zoo as though he had been born there. In honor of his donor and the yacht he has been christened "Stranger."

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